

SEQUENCE LISTING

<110> Travis, James

Potempa, Jan S

Banbula, Agnieszka

<120> Dipeptidylpeptidases And Methods Of Use

<130> 235.00440101

<150> US 60/246,827

<151> 2000-11-08

<160> 26

<170> PatentIn version 3.0

<210> 1

<211> 2139

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<213> Porphyromonas gingivalis

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<211> 712

<212> PRT

<213> Porphyromonas gingivalis

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Gln Gly Leu Ile Phe Thr Asn His His Cys Gly Tyr Gly Ala Ile Gln
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Ser Gln Ser Thr Val Asp His Asp Tyr Leu Arg Asp Gly Phe Val Ser
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Gln Glu Leu Ala Lys Lys Glu Asn Ala Asp Glu Asn Gln Leu Cys Ile
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Val Glu Pro Phe Tyr Ser Asn Asn Glu Tyr Phe Leu Ile Val Tyr Asp
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Val Phe Lys Asp Val Arg Met Val Phe Ala Pro Pro Ser Ser Val Gly
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Lys Phe Gly Gly Asp Thr Asp Asn Trp Met Trp Pro Arg His Thr Gly
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Val Ser Met Gln Gly Tyr Lys Ala Asp Asp Tyr Ala Met Thr Ile Gly
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Phe Pro Gly Ser Thr Asp Arg Tyr Leu Thr Ser Trp Gly Val Glu Asp
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Arg Ile Glu Asn Glu Asn Asn Pro Arg Ile Glu Val Arg Gly Ile Lys
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Gln Gly Ile Trp Lys Glu Ala Met Ser Ala Asp Gln Ala Thr Arg Ile
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Lys Tyr Ala Ser Lys Tyr Ala Gln Ser Ala Asn Tyr Trp Lys Asn Ser
325 330 335

Ile Gly Met Asn Arg Gly Leu Ala Arg Leu Asp Val Ile Gly Arg Lys
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 Arg Ala Glu Glu Arg Ala Phe Ala Asp Trp Ile Arg Lys Asn Gly Lys
 355 360 365
 Ser Ala Val Tyr Gly Asp Val Leu Ser Ser Leu Glu Lys Ala Tyr Lys
 370 375 380
 Glu Gly Ala Lys Ala Asn Arg Glu Met Thr Tyr Leu Ser Glu Thr Leu
 385 390 395 400
 Phe Gly Gly Thr Glu Val Val Arg Phe Ala Gln Phe Ala Asn Ala Leu
 405 410 415
 Ala Thr Asn Pro Asp Ala His Ala Gly Ile Leu Lys Ser Leu Asp Asp
 420 425 430
 Lys Tyr Lys Asp Tyr Leu Pro Ser Leu Asp Arg Lys Val Leu Pro Ala
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 Met Leu Asp Ile Val Arg Arg Arg Ile Pro Ala Asp Lys Leu Pro Asp
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 Tyr Ala Asp Phe Val Phe Asp Lys Ser Val Val Pro Tyr Ser Asp Lys
 485 490 495
 Phe His Ala Met Leu Lys Ser Met Asp Lys Glu Lys Phe Ala Lys Ala
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 Ile Glu Lys Asp Pro Ala Val Glu Leu Ser Lys Ser Val Ile Ala Ala
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 Ala Arg Ala Ile Gln Ala Asp Ala Met Ala Asn Ala Tyr Ala Ile Glu
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 Arg Ala Leu Pro Ser Asp Ala Asn Phe Thr Met Arg Met Ser Tyr Gly
 565 570 575
 Ser Ile Lys Gly Tyr Glu Pro Gln Asp Gly Ala Trp Tyr Asn Tyr His
 580 585 590
 Thr Thr Gly Lys Gly Val Leu Glu Lys Gln Asp Pro Lys Ser Asp Glu
 595 600 605
 Phe Ala Val Gln Glu Asn Ile Leu Asp Leu Phe Arg Thr Lys Asn Tyr
 610 615 620
 Gly Arg Tyr Ala Glu Asn Gly Gln Leu His Ile Ala Phe Leu Ser Asn
 625 630 635 640
 Asn Asp Ile Thr Gly Gly Asn Ser Gly Ser Pro Val Phe Asp Lys Asn
 645 650 655
 Gly Arg Leu Ile Gly Leu Ala Phe Asp Gly Asn Trp Glu Ala Met Ser
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Gly Asp Ile Glu Phe Glu Pro Asp Leu Gln Arg Thr Ile Ser Val Asp
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<210> 3

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<212> PRT

<213> Porphyromonas gingivalis

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Val Leu Phe Met
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<210> 4

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<212> PRT

<213> Staphylococcus aureus

<400> 4

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<210> 5

<211> 734

<212> PRT

<213> Shewanella putrefaciens

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35 40 45
Asp Val Leu Lys Ala Lys Gly Leu Glu Ile Asp Ala Lys Ser Ile Ser
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Lys Leu Thr Glu Phe Pro Met Asn Ala Val Ile Ser Leu Gly Gly Cys
65 70 75 80
Thr Ala Ser Phe Val Ser Pro Lys Gly Leu Val Val Thr Asn His His
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Cys Ala Tyr Gly Ser Ile Gln Tyr Asn Ser Thr Pro Glu Lys Asn Leu
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Leu Gln Asp Gly Phe Leu Ala Lys Thr Phe Ala Asp Glu Leu Pro Ala
115 120 125
Ala Pro Gly Ser Arg Val Tyr Val Thr Glu Asp Val Thr Asn Val Thr
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Glu Arg Val Lys Ala Gly Leu Glu Asn Lys Thr Gly Arg Glu Phe Tyr
145 150 155 160
Gln Gly Val Glu Asn Gln Glu Lys Ala Leu Val Ala Glu Cys Glu Lys
165 170 175
Asp Glu Gly Tyr Arg Cys Gln Val Tyr Ser Phe His Gly Gly Leu Glu
180 185 190
Tyr Tyr Leu Val Lys Gln Leu Glu Ile Arg Asp Val Arg Leu Val Tyr
195 200 205
Asn Pro Ala Gly Ser Val Gly Lys Tyr Gly Gly Asp Val Asp Asn Trp
210 215 220
Met Trp Pro Arg His Thr Gly Asp Tyr Ser Phe Tyr Arg Ala Tyr Val
225 230 235 240
Ser Lys Asn Gly Lys Pro Ala Glu Phe Ser Ala Asp Asn Val Pro Tyr
245 250 255
Glu Pro Lys Ser Phe Leu Lys Val Ser Ala Lys Gly Val Ser Glu Gly
260 265 270
Asp Phe Val Met Val Ala Gly Tyr Pro Gly Arg Thr Asn Arg Tyr Arg
275 280 285
Thr Ala Thr Glu Val Gln Asn Glu Phe Glu Trp Ala Tyr Pro Glu Gly
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Lys Met Leu Arg Glu Arg Phe Ile Glu Ile Ile Lys Ala Thr Ala Pro
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Glu Gly Ser Asp Glu Arg Ile Lys Tyr Glu Ser Gln Ile Ala Gly Leu
 325 330 335
 Ala Asn Tyr Ala Lys Asn Phe Thr Ser Met Ile Glu Phe Tyr Gly Lys
 340 345 350
 Ser Thr Met Leu Ala Asp Arg Lys Ala Leu Glu Ala Lys Leu Ala Glu
 355 360 365
 Trp Ile Ala Lys Asp Ser Ser Arg Glu Ala Lys Tyr Gly Lys Thr Leu
 370 375 380
 Ala Glu Leu Asp Ala Leu Ile Ala Lys Ser Lys Ala His Gln Glu Arg
 385 390 395 400
 Asp Met Ile Leu Ser Tyr Ile Ser Ser Thr Thr Met Leu Pro Thr Ala
 405 410 415
 Asn Asn Leu Tyr Arg Leu Ala His Glu Lys Gln Leu Pro Asp Met Gln
 420 425 430
 Arg Glu Pro Gly Phe Gln Asp Arg Asp Met Thr Arg Phe Lys Ala Ser
 435 440 445
 Met Glu Arg Ile Asp Arg Arg Tyr Ala Ala Ser Val Asp Lys Ala Val
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 465 470 475 480
 Leu Pro Ala Met Asp Lys Ala Phe Gly Ile Asp Asn Lys Val Asn Glu
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 Ala Lys Leu Ala Lys Thr Leu Asp Lys Met Tyr Ala Lys Thr Glu Leu
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 Gly Asn Lys Asp Val Arg Leu Ala Trp Met Glu Lys Ser Val Asp Asp
 515 520 525
 Phe Lys Ala Ser Lys Asp Pro Phe Ile Gln Phe Ala Val Ala Met Tyr
 530 535 540
 Asp Thr Asn Met Ser Glu Glu Lys Lys Glu Lys Glu Leu Asp Gly Glu
 545 550 555 560
 Leu Met Lys Val Arg Pro Gln Tyr Met Asp Ala Ile Ile Ala Tyr Asn
 565 570 575
 Leu Glu Gln Gly Lys Pro Val Tyr Ala Asp Ala Asn Ser Ser Leu Arg
 580 585 590
 Val Thr Val Gly His Val Lys Gly Tyr Ser Pro Lys Asp Gly Leu Val
 595 600 605
 Ala Val Pro Phe Thr Arg Leu Glu Gly Ile Val Gln Lys Asp Thr Gly
 610 615 620
 Ile Asp Pro Phe Asp Ala Pro Lys Gln Gln Leu Glu Leu Ile Lys Gln
 625 630 635 640
 Lys Gln Tyr Gly Asp Phe Tyr Met Lys Ser Ile Asp Ser Val Pro Val
 645 650 655

Asn Phe Leu Ser Thr Leu Asp Thr Thr Gly Gly Asn Ser Gly Ser Pro
660 665 670
Thr Leu Asn Gly Arg Ala Glu Leu Val Gly Leu Leu Phe Asp Gly Val
675 680 685
Tyr Glu Ser Ile Ile Gly Gly Trp Ala Phe Asp Asn Glu Ile Asn Arg
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<210> 6

<211> 732

<212> PRT

<213> Shewanella putrefaciens

<400> 6

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35 40 45
Asp Leu Thr Ser Tyr Pro Met Asn Ala Val Val Gly Leu Gly Tyr Cys
50 55 60
Thr Ala Ser Phe Val Ser Pro Gln Gly Leu Val Val Thr Asn His His
65 70 75 80
Cys Ala Tyr Lys Ala Ile Gln Tyr Asn Thr Lys Lys Glu His Asn Tyr
85 90 95
Leu Glu Gln Gly Phe Leu Ala Thr Ser Met Asp Lys Glu Pro Ser Ala
100 105 110
Gly Pro Asn Glu Arg Leu Tyr Ile Thr Glu Ala Val Thr Asp Val Thr
115 120 125
Ser Asp Val Thr Lys Asp Leu Ser Gln Asp Pro Leu Lys Arg Tyr Glu
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Glu Ile Glu Asn His Ser Lys Ala Leu Ile Lys Ser Cys Glu Ala Asp
145 150 155 160
Asp Asn Tyr Arg Cys Asn Val Arg Ser Phe His Asn Gly Leu Glu Tyr
165 170 175
Tyr Leu Ile Lys Gln Leu Met Ile Arg Asp Val Arg Leu Val Tyr Ala
180 185 190
Pro Pro Glu Ser Val Gly Gly Tyr Gly Gly Asp Ile Asp Asn Tyr Glu
Page 8

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Pro Asp Ala Asn Gly Thr Leu Arg Ile Ser Tyr Gly Met Val Asp Gly
565 570 575

Tyr Gln Ser Arg Asp Ala Leu Tyr Lys Gln Pro Phe Thr Arg Leu Asp
580 585 590

Gly Ile Val Ala Lys His Thr Gly Val Glu Pro Tyr Asn Ala Pro Lys
595 600 605

Lys Leu Leu Asp Ala Ile Ser Val Gln Arg Phe Gly Asp His Leu Val
610 615 620

Lys Ser Val Tyr Gln Asp Pro Arg Gly Trp Ile Cys Arg Leu Phe Ser
625 630 635 640

Cys Leu Asp Lys Pro Glu Glu Phe Asn Ser Val Pro Val Asn Phe Leu
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Ser Ser Val Asp Thr Thr Gly Gly Asn Ser Gly Ser Pro Val Phe Asn
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Gly Lys Gly Glu Leu Val Gly Leu Asn Phe Asp Ser Thr Tyr Glu Ala
675 680 685

Ile Thr Lys Asp Trp Phe Phe Asn Pro Thr Ile Thr Arg Ala Val His
690 695 700

Val Asp Ile Arg Tyr Ile Leu Trp Met Met Asp Glu Val Asp His Ala
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725 730

T.D.B.O.T.T. = SEEDOT

<210> 7

<211> 716

<212> PRT

<213> xylella fastidiosa

<400> 7

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Glu Gln Leu Ser Asn Leu Thr Gly Asp Pro Met Gly Ala Val Val Ser
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Leu Gly Asn Cys Thr Ala Ser Leu Val Ser Pro Glu Gly Leu Val Ile
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<400> 8

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35 40 45
Leu Pro Leu Asp Ser Leu Tyr Ser Phe Asp Lys Pro Ser Ile Ala Asn
50 55 60
Ala Val Val Ile Phe Gly Gly Gly Cys Thr Gly Ile Thr Val Ser Asp
65 70 75 80
Gln Gly Leu Ile Phe Thr Asn His His Cys Gly Tyr Gly Ala Ile Gln
85 90 95
Ser Gln Ser Thr Val Asp His Asp Tyr Leu Arg Asp Gly Phe Val Ser
100 105 110
Arg Thr Met Gly Glu Glu Leu Pro Ile Pro Gly Leu Ser Val Lys Tyr
115 120 125
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130 135 140
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145 150 155 160
Gln Glu Leu Ala Lys Lys Glu Asn Ala Asp Glu Asn Gln Leu Cys Ile
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Val Glu Pro Phe Tyr Ser Asn Asn Glu Tyr Phe Leu Ile Val Tyr Asp
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Val Phe Lys Asp Val Arg Met Val Phe Ala Pro Pro Ser Ser Val Gly
195 200 205
Lys Phe Gly Gly Asp Thr Asp Asn Trp Met Trp Pro Arg His Thr Gly
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Asp Phe Ser Val Phe Arg Val Tyr Ala Gly Ala Asp Asn Arg Pro Ala
225 230 235 240
Glu Tyr Ser Lys Asp Asn Lys Pro Tyr Lys Pro Val Tyr Phe Ala Ala
245 250 255
Val Ser Met Gln Gly Tyr Lys Ala Asp Asp Tyr Ala Met Thr Ile Gly
260 265 270
Phe Pro Gly Ser Thr Asp Arg Tyr Leu Thr Ser Trp Gly Val Glu Asp
275 280 285
Arg Ile Glu Asn Glu Asn Asn Pro Arg Ile Glu Val Arg Gly Ile Lys
290 295 300
Gln Gly Ile Trp Lys Glu Ala Met Ser Ala Asp Gln Ala Thr Arg Ile
305 310 315 320

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Ser	Ala 370	Val	Tyr	Gly	Asp	Val 375	Leu	Ser	Ser	Leu	Glu 380	Lys	Ala	Tyr	Lys
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Thr	Thr	Gly 595	Lys	Gly	Val	Leu	Glu 600	Lys	Gln	Asp	Pro	Lys 605	Ser	Asp	Glu
Phe	Ala 610	Val	Gln	Glu	Asn	Ile 615	Leu	Asp	Leu	Phe	Arg 620	Thr	Lys	Asn	Tyr
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 275 280 285
 Asp Glu Trp Lys Ser Ile Asp Asn Asp Ile Arg Ile Arg Met Arg Asp
 290 295 300
 Ile Arg Gln Gly Val Met Leu Arg Glu Met Leu Ala Asp Pro Gln Ile
 305 310 315 320
 Lys Ile Met Tyr Ser Ala Lys Tyr Ala Ala Ser Gln Asn Ala Tyr Lys
 325 330 335
 Arg Ala Ile Gly Ala Asn Trp Ala Ile Lys Thr Arg Gly Leu Arg Gln
 340 345 350
 Asn Lys Gln Ala Met Gln Asp Arg Leu Ile Ala Trp Gly Ala Lys Gln
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 Gly Thr Pro Arg Tyr Glu Glu Ala Val His Glu Ile Asp Ala Thr Val
 370 375 380
 Ala Lys Arg Ala Asp Leu Arg Arg Arg Tyr Trp Met Ile Glu Glu Gly
 385 390 395 400
 Ile Ile Arg Gly Ile Glu Phe Ala Arg Ser Pro Ile Pro Thr Glu Asp
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 Glu Thr Lys Ala Leu Gln Gly Asn Asp Ala Ser Ala Arg Lys Glu Ala
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 Ile Asp Lys Ile Arg Thr Arg Tyr Ser Lys Phe Ala Asn Lys Asp Tyr
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 Ser Ala Glu Val Asp Lys Lys Val Ala Val Ala Met Leu Thr Glu Tyr
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 Leu Lys Glu Ile Pro Tyr Glu Asn Leu Pro Leu His Leu Arg Leu Val
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 Lys Asp Arg Phe Ala Gly Asp Val Gln Ala Tyr Val Asp Asp Ile Phe
 485 490 495
 Ala Arg Ser Val Phe Gly Ser Glu Ala Gln Phe Asp Ala Phe Ala Ala
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 Val Pro Ser Val Glu Lys Leu Ala Glu Asp Pro Met Val Leu Phe Ala
 515 520 525
 Ser Ser Val Phe Asp Glu Tyr Arg Lys Leu Tyr Asn Glu Leu Arg Pro
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 Tyr Asp Asp Pro Ile Leu Arg Ala Gln Arg Thr Tyr Ile Ala Gly Leu
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 Leu Glu Met Asp Gly Asp Gln Asp Gln Phe Pro Asp Ala Asn Leu Thr
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Leu Arg Phe Thr Tyr Gly Gln Val Lys Gly Tyr Ser Pro Arg Asp Asn
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 Val Tyr Tyr Gly His Gln Thr Thr Leu Asp Gly Val Met Glu Lys Glu
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 Tyr Glu Arg Lys Asp Phe Gly Arg Tyr Ala Asp Arg Ser Gly Arg Met
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 645 650 655
 Ser Pro Val Met Asn Ala Asn Gly Glu Leu Ile Gly Leu Asn Phe Asp
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 Arg Asn Trp Glu Gly Val Gly Gly Asp Ile Gln Tyr Leu Ala Asp Tyr
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Page 22